

reduced into Parallelism and diverge no more. For then those rays will recombine a Beam of white Light XY. If the refracting Angle of either Prism be the bigger, that Prism must be so much the nearer to the Lens. You will know when the Prisms and the Lens are well set together by observing if the Beam of Light XY which comes out of the second Prism be perfectly white to the very edges of the Light, and at all distances from the Prism continue perfectly and totally white like a Beam of the Sun's Light. For till this happens, the position of the Prisms and Lens to one another must be corrected, and then if by the help of a long Beam of Wood, as is represented in the Figure, or by a Tube, or some other such instrument made for that purpose, they be made fast in that situation, you may try all the same Experiments in this compounded Beam of Light XY, which in the foregoing Experiments have been made in the Sun's direct Light. For this compounded Beam of Light has the same appearance, and is endowed with all the same Properties with a direct Beam of the Sun's Light, so far as my Observation reaches. And in trying Experiments in this Beam you may by stopping any of the Colours p, q, r, s and t, at the Lens, see how the Colours produced in the Experiments are no other than those which the rays had at the Lens before they entered the composition of this Beam: And by consequence that they arise not from any new modifications of the Light by refractions and reflexions, but from the various separations and mixtures of the rays originally endowed with their colour-making qualities.

So, for instance, having with a Lens  $4\frac{1}{4}$  Inches broad, and two Prisms on either Hand  $6\frac{1}{4}$  Feet distant from the Lens, made such a Beam of compounded Light: to  
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examin the reason of the Colours made by Prisms, I refracted this compounded Beam of Light XY with another Prism HIK kh, and thereby cast the usual prismatick Colours PQRST upon the Paper LV placed behind. And then by stopping any of the Colours p, q, r, s, t, at the Lens, I found that the same Colour would vanish at the Paper. So if the purple P was stopped at the Lens, the purple P upon the Paper would vanish; and the rest of the Colours would remain unaltered, unless perhaps the blue, so far as some purple latent in it at the Lens might be separated from it by the following refractions. And so by intercepting the green upon the Lens, the green R upon the Paper would vanish, and so of the rest; which plainly shews, that as the white Beam of Light XY was compounded of several Lights variously coloured at the Lens, so the Colours which afterwards emerge out of it by new refractions are no other than those of which its whiteness was compounded. The refraction of the Prism HIK kh generates the Colours PQRST upon the Paper, not by changing the colorific qualities of the rays, but by separating the rays which had the very same colorific qualities before they entered the composition of the refracted Beam white of Light XY. For otherwise the rays which were of one Colour at the Lens might be of another upon the Paper, contrary to what we find.

So again, to examin the reason of the Colours of natural Bodies, I placed such Bodies in the Beam of Light XY, and found that they all appeared there of those their own Colours which they have in Day-light, and that those Colours depend upon the rays which had the same Colours at the Lens before they entered the composition